1-1-2019

Yield of Nine Summer Squash Varieties in Southwest Michigan

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Objective:

To evaluate commercial potential of nine summer squash selections under southwest Michigan growing conditions.

Summary:

Differences were noted in all traits evaluated. Five entries, SVYG6633, SVYG5395, 'Spineless Supreme', 'Everglade', and SV9494YG should be considered for commercial production based on total yield. If yield of smaller fruit is desired, then SVYG6633 and SVYG5395 are good possibilities.

Materials and Methods:

Fertilizer: Prior to planting 33-0-0, 0-0-60, 95% sulfur and Solubor were broadcast and incorporated at 67, 117, 19 and 9 pounds/acre, respectively. After planting, 42 additional pounds of nitrogen was applied through the drip system as 28% nitrogen beginning 11 June and ending 23 July for a total nitrogen application of 65 pounds per acre.
Planting: All entries were direct seeded 25 May, 2018 on plastic mulched, 6" high raised beds into which a drip tape was inserted at the time of bed shaping. Rows were spaced 5.5' on center with an in row spacing of 1.5' providing 5280 plants/acre. The trial was planted as a completely randomized design with four replications and eight plants/replication. Two guard plants bordered each plot.
Plant Care: Plots were irrigated as needed and disease and insect pests controlled using commercially recommended cultural practices. Weeds were controlled using the black plastic and hand weeding between rows.
Harvest and data collection: Harvest was conducted twelve times between 3 July and 30 July and fruit graded into number one small, medium, large and culls. The one yellow squash entry was excluded from the data set when it was subjected to statistical analysis.

Results:

Significant differences were noted in all traits evaluated (Table 1). Five entries (SVYG6633, SVYG5395, 'Spineless Supreme', 'Everglade', and SV9494YG) had statistically similar total yield. These five, plus SV6009YG, had similar yield of cull fruit (Table 1). Most cull fruit were due to poor pollination or blossom end rot.

'Everglade', SV6009YG, SV9043YG, and 'SVYG6633' had darker colored fruit while SVYG5395 had lighter colored fruit (Figure 1 – 4). The preferred variety by most growers in Southwest Michigan is 'Spineless Beauty'. 'Spineless Beauty' has good yield, light green in color, but has no virus tolerance. Lighter colored fruit tend to not show skin abrasions as easily as a darker colored fruit. However, virus tolerance is generally needed after aphid populations increase during the latter part of the production season.

Based on high total yield, SVYG6633, SVYG5395, 'Spineless Supreme', 'Everglade', and SV9494YG are worth considering for commercial production. The five were similar in all categories except yield of small fruit where SVYG6633 and SVYG5395 were leaders. Therefore, if your market desires smaller fruit market, consider these two.

Table 1. Nine summer squash grown at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan in 2018. Plant population was 5280 plants per acre. Numbers in bold are not statistically different from the highest number in that column. Yields are in ½ bushels/acre.

Variety	Seed Source	Total Yield	Yield Small	Yield Medium	Yield Large	Yield Cull
SVYG6633	SE	**1579**	**605**	**537**	**195**	**241**
SVYG5395	SE	**1514**	**513**	**434**	**228**	**339**
Spineless Supreme	SY	**1338**	420	**411**	**166**	**342**
Everglade	SY	**1283**	487	**447**	**113**	**237**
SV9494YG	SE	**1268**	424	**364**	**150**	**329**
SV6009YG	SE	1229	423	**405**	**129**	**272**
Grandprize (Yellow Squash)	SY	856	442	187	75	152
SV9043YG	SE	852	337	279	74	162
SV0914YG	SE	820	316	**350**	43	110
	lsd 0.05	**326**	**100**	**194**	**131**	**121**

Figure 1. Nine summer squash grown at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan in 2018. Bottom row left to right: SV9043YG, SVYG5395, and SVYG6633. Middle row left to right: SV0914YG, SV6009YG, and SV9494YG. Top row, left to right: 'Spineless Supreme', 'Everglade', and 'Grandprize'.

Figure 2. Summer squash grown at the Southwest Michigan Research and Extension Center, Benton Harbor Michigan in 2018. Left to right: ‘Spineless Supreme’, ‘Everglade’, and ‘Grandprize’.

Figure 3. Summer squash grown at the Southwest Michigan Research and Extension Center, Benton Harbor Michigan in 2018. Left to right: SV0914YG, SV6009YG, and SV9494YG.

Figure 4. Summer squash grown at the Southwest Michigan Research and Extension Center, Benton Harbor Michigan in 2018. Left to right: SV9043YG, SVYG5395, and SVYG6633.